

# PATENT ABSTRACTS OF JAPAN

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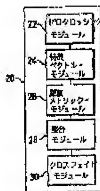
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## (54) METHOD AND DEVICE FOR CHANGING TIME SCALE

(57)Abstract:

**PROBLEM TO BE SOLVED:** To provide the method and the device to execute the time scale change of signals using the time region means which includes zero crossings and slopes.

**SOLUTION:** The method and device are provided to execute a time scale change. The method includes a zero crossing module 22 which determines the zero crossing points in the signals, a feature vector module 24 which generates the feature vectors to describe the zero crossing points, a distance metric module 26 which generates the distance metrics to describe the local features at the zero crossing points and a matching module 28 which makes the matching of the signals in accordance with a local similarity and the similarity over a selected time interval using the feature vectors and the distance metrics and synthesizes and changes the time scale. Note that the method also includes a cross



fade module 20 which makes the transition of the time scale changed signals between continuous frames smooth.